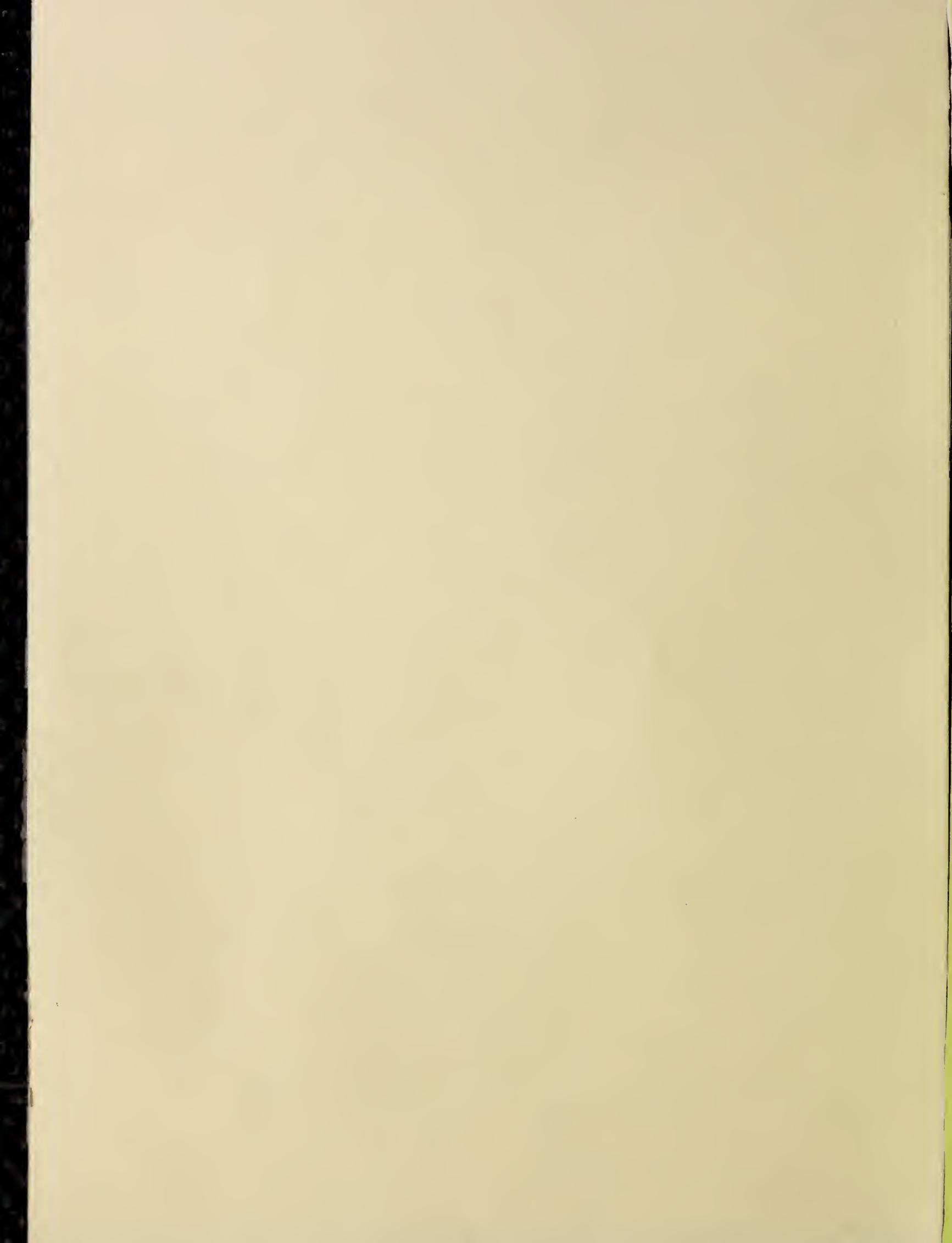


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Do not assume content reflects current scientific knowledge, policies, or practices.



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United States  
Department of  
Agriculture

Soil  
Conservation  
Service

Spokane,  
Washington



# Water Supply Outlook for Washington

as of MAY 1, 1984



## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

### COVER PHOTO: "Spring is on its way"

### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

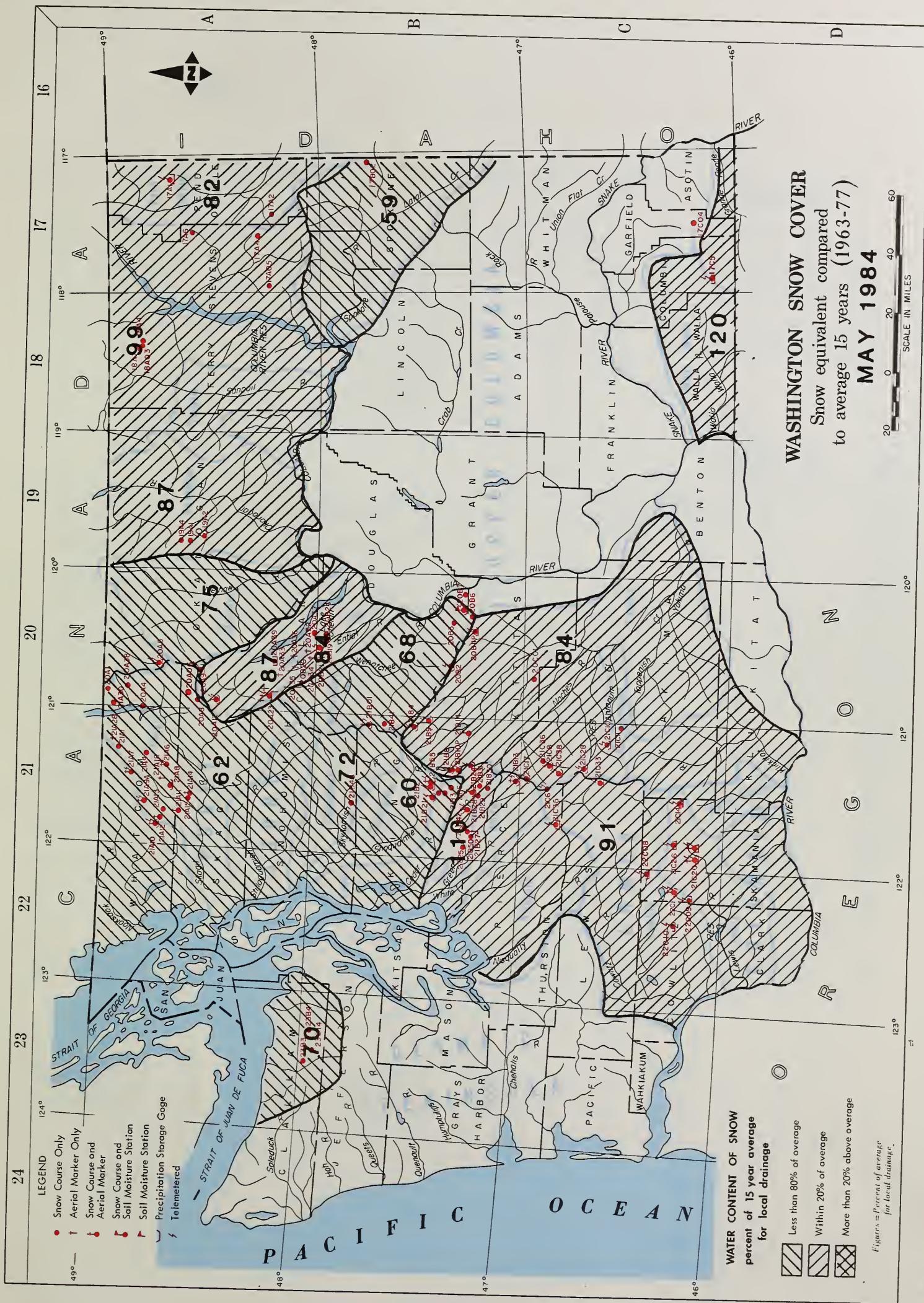
Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P.O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P.O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4402 Federal Bldg., 125 South State St., Salt Lake City, Utah 84147
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P.O. Box 2440, Casper, Wyoming 82601

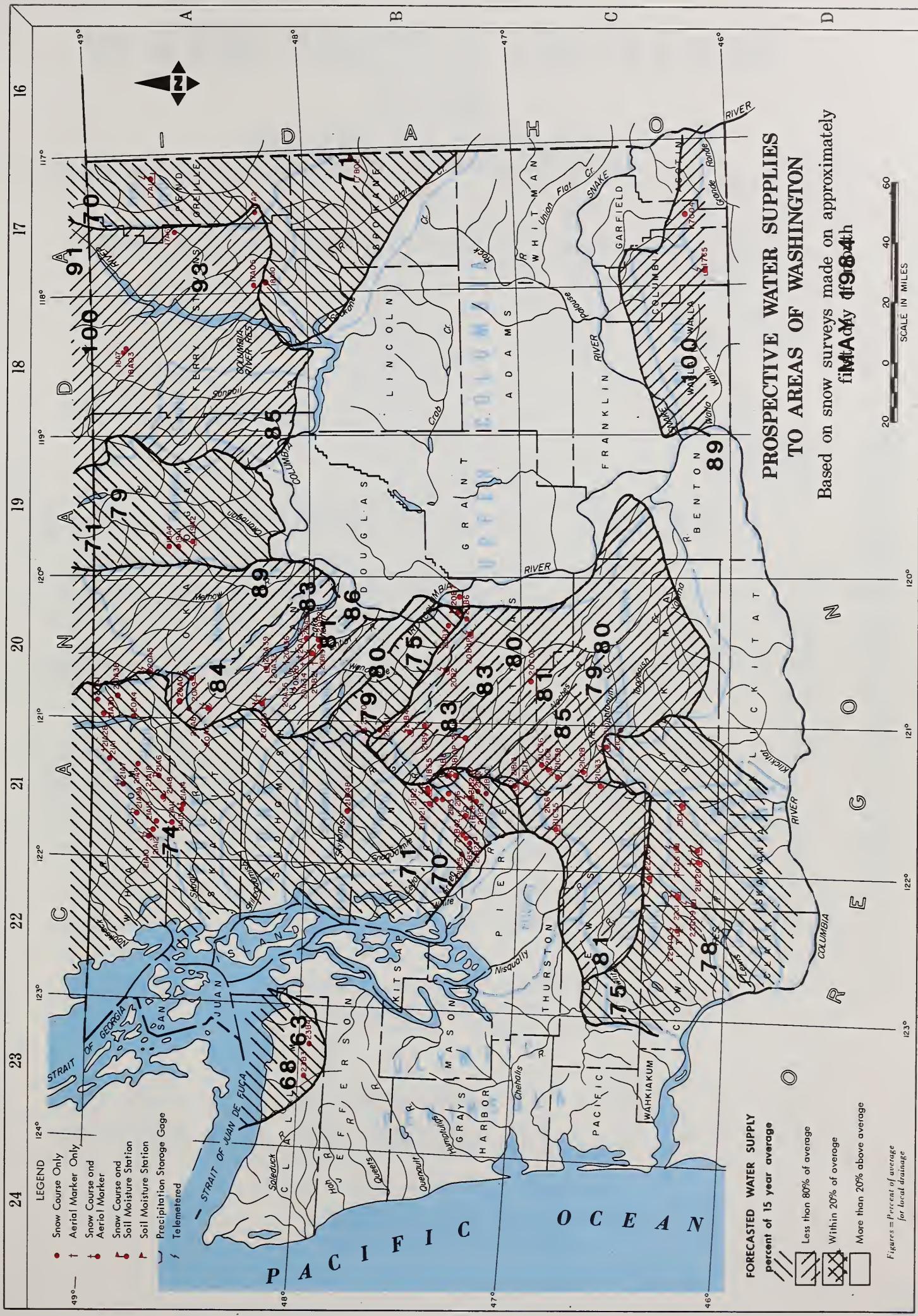
### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 — for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 — for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 — and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.





INDEX to WASHINGTON SNOW COURSES,  
SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES



INDEX to WASHINGTON SNOW COURSES,  
SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	ELEV.	NAME	NUMBER	ELEV.	NAME	NUMBER	ELEV.	NAME	NUMBER	ELEV.	NAME	NUMBER	ELEV.	NAME	NUMBER	ELEV.	NAME	NUMBER	ELEV.
<b>UPPER COLUMBIA DRAINAGE</b>																				
Pend Oreille River	17A2	7	3IN	43E	5250	Spruce Springs	17C4	9	8N	40E	5700	Dock Butte	21A1A	8	36N	8E	3800			
Boyer Mountain	17A1SP	24	37N	44E	5000	Touchet Na. 2	17C5SP	6	7N	40E	5530	Easy Pass	21A7A	19	39N	11E	5200			
Bunchgrass Meadow												Jasper Pass	21A6A	17	38N	11E	5400			
Kettle River	18A7	20	39N	35E	4600	Touchet River	17C5SP	6				Marten Lake	21A9A	23	38N	8E	3600			
Summit G. S.												Mount Blum	21A1Ba	27	38N	10E	5800			
Rugged Ridge	17B02	12	27N	45E	3333	Lewis River	22C0SP	26	8N	5E	3200	Rocky Creek	21A12AP	20	37N	8E	2100			
Spokane River	17A6	19	36N	42E	3215	Lone Pine Shelter	21C2SP	8	9N	7E	3800	Schreibers Meadow	21A10AP	18	37N	8E	3400			
Colville River	17A5	26	31N	38E	3215	Plains of Abraham	21C1SP	35	9N	5E	4400	S. F. Thunder Creek	21A14A	20	36N	9E	2200			
Baird Stronger Mountain	18A10	6	29N	38E	3370	Spencer Meadow	21C20SP	16	8N	7E	3400	Sulphur Creek	21A13	22	37N	8E	1600			
Logo						Surprise Lakes	21C13SP	14	7N	8E	4250	Three Mile Creek	21A15	18	36N	9E	1600			
Watson Lakes												Watson Lakes	21A8P	25	37N	9E	4500			
<b>LOWER COLUMBIA DRAINAGE</b>																				
Okanogan River	19A1	30	37N	24E	5700	Coyuse Pass	21C6	15	16N	10E	5300	Dock Butte	21A7							
Mutton Creek No. 1	19A4	19	37N	24E	6000	Digital Peak	21C3SP	11	13N	11E	5900	Easy Pass	21A7A							
Mutton Creek No. 2	19A2SP	33	37N	24E	4500	Potato Hill	21C14SP	36	10N	10E	4500	Jasper Pass	21A7M							
Salmon Meadows						Sheep Canyon	22C10SP	12	8N	4E	4050	Marten Lake	21A7M							
Harts Pass						Strawberry	22C08SP	9	10N	6E	3280	Mount Blum	21A7M							
Lyman Lake						Cowlitz River	21C16					Rocky Creek	21A7							
Park Creek Ridge	20A12SP	18	31N	16E	5900	Paradise Park (New)	21C35SP	13	15N	8E	5500	Schreibers Meadow	21A7A							
Rainy Pass	20A9SP	18	34N	16E	4600	White River	21B13SP	30	18N	11E	6000	Spencer Meadow	21A7M							
Mirror Lake	20A39	30	31N	18E	5600	Corral Pass	21B13SP					Surprise Lakes	21A7M							
<b>PUGET SOUND DRAINAGE</b>																				
Entiat River	20B19	34	28N	19E	1600	Paradise Park (New)	21C35SP	13	15N	8E	5500	Green River	21B24P	18	20N	11E	1800			
Brief	20A33a	28	31N	17E	4540	Paradise Park	21B24P	27	21N	8E	1200	Charley Creek	21B24P	21	21N	8E	3200			
Entiat Meadows	20A34a	2	30N	17E	3235	Cougar Mountain	21B24P	14	20N	8E	2900	Gross Mountain No. 2	21B22	14	20N	8E	2900			
Entiat River Trail	20A36a	17	30N	18E	6510	Gross Mountain No. 3	21B22	12	20N	8E	2100	Lester Creek	21B28	36	20N	10E	3100			
Fox Camp	20B20a	17	29N	18E	3340	Lyn Lake	21B29	22	20N	8E	4000	Stampede Pass	21B30	25	21N	11E	4700			
Pope Ridge	20B20SP	22	29N	18E	3540	Twin Camp	21B30	18	19N	11E	4100	Twins	21B30	18	19N	11E	3860			
Pope Ridge Snow Pillow																				
Pugh Ridge	20A32a	34	30N	18E	6725															
Shady Pass	20A37	20	29N	19E	6200															
Show Brushy	20A35a	21	30N	17E	3910															
Tommy Creek	20B21a	10	29N	18E	4900															
<b>SNOQUALMIE RIVER</b>																				
Wenatchee River	21B14SP	13	26N	14E	3240	City Cabin	21B3	10	21N	10E	2390	City Cabin	21B3	30	22N	10E	3300			
Berne-Mill Creek (New)	20B21SP	35	22N	17E	4270	Mt. Gardner	21B21P													
Blewett Pass No. 2	20B11SP	14	26N	13E	5310															
Stevens Pass	20B25SP	10	20N	20E																
Trough #2																				
Squilchuck Creek	20B3	12	21N	19E	4400															
Beehive Springs																				
Stemilt Creek	20B6	30	21N	20E	5000															
Stemilt Slide	20B7SP	30	21N	20E	4400															
Upper Wheeler																				
<b>SNOQUALMIE RIVER</b>																				
Yakima River	21C11	24	12N	14E	3100	Alpine Meadow	21B48	31	27N	9E	3500	Snoqualmie River	21A4	35	39N	12E	2200			
Abntrum R. S.	21B9SP	35	23N	14E	3200	Ollie Meadow	21B2P	19	22N	11E	3625		21A1	9	39N	12E	3680			
Big Boulder Creek	21C8P	23	16N	12E	3450	Beaver Creek Trail	21A1	26	40N	12E	6000		21A2	26	40N	12E	6000			
Bumping Lake New	21C36	13	16N	12E	3400	Beaver Pass	21A28a	34	38N	16E	5900		20A4	14	40N	14E	3500			
Bumping Ridge	21C58SP	9	15N	12E	4500	Brown Top	20A4	20	22N	11E	3700		20A1	14	40N	14E	3500			
Fish Lake	21B4SP	28	14N	14E	3371	Devi's Park	20A4	20	22N	11E	3700		20A1	14	40N	14E	3500			
Green Lake	21C10SP	3	12N	13E	6000	Freezeout Creek Trail	20A1	14	40N	14E	3500		20A1	14	40N	14E	3500			
Grouse Camp	20B11SP	29	21N	19E	5385	Freezeout Meadows (New)	20A38	8	40N	16E	5000		20A1	14	40N	16E	5000			
Lake Cle Elum	21B14M	15	20N	14E	2200	Granite Creek	20A06	25	36N	16E	3500		20A1	25	36N	16E	3500			
Morse Lake	21C17SP	6	16N	11E	5400	Meadows Cabins	20A8	29	36N	14E	1900		20A1	29	36N	14E	1900			
Tunnel Avenue	21B8P	13	21N	11E	2450	New Hosomene Lake	21A30	19	40N	14E	2800		20A1	19	40N	14E	2800			
White Pass (East Side)	21C28SP	2	13N	11E	4500	Thunder Basin	20A07	30	35N	14E	4200		20A1	30	35N	14E	4200			

# **WATER SUPPLY OUTLOOK FOR WASHINGTON**

**and**

**FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS**

ISSUED BY

**PETER C. MYERS**

**Chief**

**SOIL CONSERVATION SERVICE  
WASHINGTON, D.C.**

RELEASED BY

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**STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
SPOKANE, WASHINGTON**

FORECASTS BY

**SOIL CONSERVATION SERVICE  
WATER SUPPLY FORECASTING STAFF, WNTC  
PORTLAND, OREGON**  
**and**  
**NATIONAL WEATHER SERVICE**  
**RIVER FORECAST CENTER  
PORTLAND, OREGON**

REPORT PREPARED BY

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SPOKANE, WASHINGTON 99201**



## WATER SUPPLY OUTLOOK

State of Washington

May 1, 1984

The forecast's for water supply's for most of Washington continued much the same as last month. Water users in the Olympic's and the Puget Sound areas can expect below normal runoff this spring and summer. The mountain snowpack ranges well below average to average. There was some minor improvement in the snow cover over the Yakima river basin. It is below average in the Spokane, Pend Oreille, Wenatchee, Entiat and Methow Rivers. The Northwest Cascade slopes show well below average snowpack, with the Skagit having 62% of normal. Fall and winter precipitation was above normal in all sections of the state. Reservoir storage continues very good for May 1. Streamflow continued above average for the Kettle, Okanogan, Walla Walla and Columbia Rivers.

### SNOW COVER

Snow cover in the Puget Sound Watersheds is well below normal. It ranges from a low of 62% on the Skagit, to 110% on the White River. Olympic Peninsula streams are also below average with the Elwha and the Dungeness having a snowpack at 70% of normal. The other area of the state with much below average snowpack is the Spokane River drainage which has 59% of normal. The Entiat River snow courses showed some improvement increasing to 84% of average snow cover.

The Kettle River continues to be near average, as does the Cowlitz River. The Blue Mountain area of the state has the best snowpack being near 120%. All other areas in the state are between 80 and 90% of average.

### PRECIPITATION

April Precipitation was mixed over the state, with Northeastern Washington, Southeastern Washington and the Southwest Cascade being above average. Precipitation during the November-March winter period has been above average over the entire state except the Southwest Cascade area. During this period the Puget Sound area received 63.54 inches, 102% of normal. The Yakima area received 30.02 inches, 101% of normal. Precipitation in the northeastern area was 139% of normal.

### RESERVOIR STORAGE

May 1 stored water supplies continue very good, with all sections of the state reporting above average storage. The Yakima irrigation reservoirs are storing 991,000 acre feet of water compared to the April 1 average of 752,100, or 131% of normal. The reservoirs in the Okanogan Irrigation District are at capacity. Lake Chelan is at 261,700 acre-feet, 119% of normal.

### STREAMFLOW

Stream flows during April varied over the state. Streams which had above average runoff for March included the Kettle River at 166%, the Okanogan River at 123%, the Walla Walla River at 111% and the Columbia River at The Dalles 125%. Other streams in the state having below average flows were the Pend Oreille River at 84%, Spokane River at 98%, Yakima River at 93% and the Skagit River at 78%.

The Puget Sound rivers are still forecast below average, with the Skagit at 74%, the Cedar at 71% and the Dungeness at 63%. Forecasts for spring and summer streamflow will be within 20% of average over most of the state. The forecasts for the streams in the Yakima Basin remains nearly constant with 80% at Parker and Cle Elum. Some forecasts for the rest of the state are, the Wenatchee at 80%, the Methow at 89% and the Okanogan at 79%. The Spokane Rivers forecasts remain at 70%.

STREAMFLOW FORECASTS - MAY 1984

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. These forecasts are made as a product of the cooperative efforts of the Soil Conservation Service and the National Weather Service. Streamflow figures for 1982 and 1983 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1984	Seasonal Streamflow in Thousands of Acre-Feet					
		% 20-Yr. Avg.	Fore- cast period	1983	1982	1981	20-Yr. Average 61-80

COLUMBIA BASIN

COLUMBIA RIVER SYSTEM 1/

Columbia River at Birchbank	40900	92	May-Sept	43225	48575	48531	44605
	32800	92	May-July	34569	38210	38501	35705
	23900	92	May-June	24281	27454	27002	26027
Columbia River at Grand Coulee	58000	87	May-Sept	46662	56425	70303	66841
	48500	86	May-July	34933	43821	58525	56169
	38300	87	May-June	26597	32610	44235	44036
Columbia River bl. Rock Island Dam	63800	88	May-Sept	44560	79386	77308	72781
	53700	87	May-July	58672	66629	64689	61601
	42400	88	May-June	69844	50985	49348	48384
Columbia River at The Dalles, OR	95200	94	May-Sept	103682	118503	96188	101000
	80600	93	May-July	88273	101631	81125	86500
	65200	93	May-June	70038	80122	63521	70100

PEND OREILLE RIVER SYSTEM

Pend Oreille River bl. Box Canyon	11600	75	May-Sept	12841	17721	13896	15425
	10600	75	May-July	11482	16324	13179	14156
	9170	75	May-June	9226	13306	11594	12227

KETTLE RIVER SYSTEM

Kettle River nr. Layruer	1829	100	May-Sept	2709	2330	2184	1829
	1738	100	May-July	2534	2174	2013	1738
	1581	100	May-June	2251	1747	1657	1581
Colville River at Kettle Falls	125	93	May-Sept	182	160	125	134
	115	93	May-July	161	146	111	123
	106	93	May-June	144	132	95	114

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Basin, Stream and Station	Forecast Runoff 1984	Seasonal Streamflow in Thousands of Acre-Feet						20-Yr. Average 61-80
		% 20-Yr. Avg.	Fore- cast Period	1983	1982	1981		
<u>SPOKANE RIVER SYSTEM</u>								
Spokane River <u>2/</u> at Post Falls, ID	2020 1955	71 71	May-Sept May-July	M M	M M	2238 2145	2848 2754	
<u>OKANOGAN RIVER SYSTEM</u>								
Similkameen River nr. Nighthawk	1040 970 825	71 71 71	May-Sept May-July May-June	1490 1356 1155	1638 1491 1166	1241 1118 930	1462 1365 1161	
Okanogan River nr. Tonasket	1300 1180 1000	79 79 79	May-Sept May-July May-June	2170 1891 1569	2046 1712 1306	1631 1416 1107	1644 1497 1262	
<u>METHOW RIVER SYSTEM</u>								
Methow River nr. Pateros	873 808 583	89 89 89	May-Sept May-July May-June	1354 1243 1094	1203 1120 918	786 724 602	980 908 773	
<u>CHELAN RIVER SYSTEM</u>								
Chelan River at Chelan <u>3/</u>	1000 876 686	83 83 83	May-Sept May-July May-June	1261 1104 901	1376 1223 958	916 798 621	1203 1055 826	
Stehekin River at Stehekin	720 611 465	84 84 84	May-Sept May-July May-June	M 727 572	938 800 603	662 543 403	860 727 553	
Entiat River nr. Ardenvoir	190 173 140	81 81 81	May-Sept May-July May-June	292 263 221	282 258 206	186 168 137	235 213 172	
<u>WENATCHEE RIVER SYSTEM</u>								
Wenatchee River nr. Plain	1020 910 720	80 80 80	May-Sept May-July May-June	M M M	M M M	M M M	1270 1136 899	
Wenatchee River at Peshastin	1370 1235 990	80 80 80	May-Sept May-July May-June	1590 1432 1191	2013 1791 1429	1188 1075 869	1712 1545 1237	
Stemilt Basin nr. Wenatchee	104*	75	May-Sept	M	M	M	**138	
Icicle Creek nr. Leavenworth	291 270 213	79 79 79	May-Sept May-July May-June	M M M	M M M	M M M	**370 **340 **270	

\* Thousands of Miners' Inches

\*\* Average Computed for 1963-1977

2/ Forecasts made by Jerry Beard, Soil Conservation Service, Boise, Idaho.  
Observed flow corrected for storage in Coeur d'Alene Lake.

3/ Observed flow corrected for storage in Lake Chelan.

Basin, Stream and Station	Forecast Runoff 1984	Seasonal Streamflow in Thousands of Acre-Feet						20-Yr. Average 61-80
		% 20-Yr. Avg.	Fore- cast Period	1983	1982	1981		
<b>YAKIMA RIVER SYSTEM</b>								
Yakima River nr. Martin <u>4/</u>	116 107 93	83 83 83	May-Sept May-July May-June	109 96 81	152 138 121	95 82 73	139 128 111	
Yakima River at Cle Elum <u>5/</u>	754 683 587	80 80 80	May-Sept May-July May-June	733 659 589	1100 1010 883	700 643 563	943 854 734	
Yakima River nr. Parker <u>6/</u>	1680 1520 1330	80 80 80	May-Sept May-July May-June	2221 1958 1722	2434 2193 1909	1194 1059 961	2096 1898 1667	
Kachess River ne. Easton <u>7/</u>	100 95 84	83 83 83	May-Sept May-July May-June	105 96 84	134 126 110	81 72 66	121 115 101	
Cle Elum River nr. Roslyn <u>8/</u>	400 365 305	86 86 86	May-Sept May-July May-June	421 381 324	516 468 392	313 282 244	463 422 353	
Bumping River <u>9/</u> nr. Nile	124 112 93	87 87 87	May-Sept May-July May-June	137 128 109	161 147 123	78 70 63	142 129 107	
American River nr. Nile	103 94 78	83 83 83	May-Sept May-July May-June	M M M	140 130 109	63 58 51	124 113 94	
Tieton River <u>10/</u> at Tieton Dam	210 176 140	85 85 85	May-Sept May-July May-June	M M M	M M M	148 131 108	246 207 165	
Naches River <u>11/</u> nr. Naches	700 635 540	81 81 81	May-Sept May-July May-June	966 881 770	998 945 775	419 380 339	867 784 667	
Ahtanum Creek <u>12/</u> nr. Tampico	37 34 29	79 79 79	May-Sept May-Sept May-June	M M M	M M M	M M M	47 43 37	

4/ Observed flow corrected for storage in Lake Keechelus.

5/ Observed flow corrected for storage in Keechelus, Kachess, and Cle Elum Lakes and Diversion by Kittitas Canal.

6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes and diversions by Rosa, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.

7/ Observed flow corrected for storage in Lake Kachess.

8/ Observed flow corrected for storage in Lake Cle Elum.

9/ Observed flow corrected for storage in Bumping Lake.

10/ Observed flow corrected for storage in Rimrock Lake.

11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley Wapatox Canals and City of Yakima.

12/ Observed flow of North and South Forks (continued).

Basin, Stream and Station	Forecast Runoff 1984	Seasonal Streamflow in Thousands of Acre-Feet						20-Yr. Average 61-80
		% 20-Yr. Avg.	Fore- cast Period	1983	1982	1981		

#### LOWER COLUMBIA RIVER SYSTEM

Mill Creek at Walla Walla	17.5 17.3 17.2	100 100 100	May-Sept May-July May-June	13.48 13.39 13.36	24.62 24.48 21.63	28.5 28.5 27.3	**17.50 **17.33 **17.15
Lewis River at Ariel <u>13/</u>	974 847 750	78 78 78	May-Sept May-July May-June	1255 1046 821	1170 1030 927	1096 971 865	1249 1086 961
Cowlitz River <u>14/</u> bl. Mayfield Dam	1650 1440 1220	81 81 81	May-Sept May-July May-June	1935 1754 1424	4936 1963 1722	M M M	2038 1778 1502
Cowlitz River <u>14/</u> at Castle Rock	2000 1740 1485	75 75 75	May-Sept May-July May-June	2618 2195 1739	2655 2363 2080	2390 2125 1875	2673 2323 1980

#### OLYMPIC PENINSULA

#### DUNGENESS RIVER SYSTEM

Dungeness River nr. Sequim	100 82 61	63 63 63	May-Sept May-July May-June	197 158 117	196 163 117	109 88 70	160 130 97
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#### ELWHA RIVER SYSTEM

Elwha River nr. Port Angeles	375 308	68 68	May-Sept May-July	538 448	607 512	380 316	**553 **454
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#### PUGET SOUND

#### SKAGIT RIVER SYSTEM

Skagit River at Newhalem <u>15/</u>	1874 1740 1460 1100	74 74 74 74	May-Aug May-Sept May-July May-June	1995 1531 1061 698	2248 1880 1439 1004	2119 1773 1431 1064	**2532 **2356 **1972 **1485
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#### GREEN RIVER SYSTEM

Green River bl. Howard Hanson Dam <u>16/</u>	220 200 180	70 70 70	May-Sept May-Sept May-June	190 145 107	227 195 174	268 245 219	**316 **284 **256
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#### CEDAR RIVER SYSTEM

Cedar River nr. Cedar Falls	66	71	May-Sept	66	80	74	**93
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13/ Observed flow corrected for storage in Lake Merwin, Yale and Swift reservoirs.

14/ Observed flow corrected for storage in Riffe Lake and Mayfield Reservoir.

15/ Observed flow corrected for storage in Diablo, Ross and Gorge Reservoirs.

16/ Observed flow corrected for storage in Howard Hanson Dam.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of washington stream basins presents the water content of the snow about April 1, 1984, as percent of the same date in 1983 and 1982 and average of record.

Tributary Basin	No. of Courses	1984 Snow Water Expressed		
		1983	1982	1961-80 Ave.
<u>UPPER COLUMBIA BASIN</u>				
Pend Oreille	11	86	63	82
Kettle	6	86	77	99
Colville				
Spokane	6	76	55	59
Okanogan	22	79	62	87
Methow	2	87	45	75
Chelan	3	103	67	87
Entiat	8	74	64	84
Wenatchee	8	106	41	68
Yakima	13	118	75	84
Antanum				
<u>LOWER COLUMBIA BASIN</u>				
Cowlitz	2	96	88	91
<u>PUGET SOUND</u>				
White	3		82	93
Green	5	166	101	110
Snoqualmie	1	250	59	60
Skykomish	2	110	69	72
Skagit	15	82	52	62
Baker	9	106		78
<u>OLYMPIC PENNINSULA</u>				
Morse	1	80	65	81
Elwha	1	81	63	64
Dungeness	1	50	45	53

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (April)			
			1984	1983	1982	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	230.8	182.3	247.5	238.4
Columbia	Franklin D. Roosevelt Lake	5232.0	2222.3	523.4	412.9	867.8
Columbia	Banks Lake	714.9	405.6 2/	650.7	618.7	442.8
Okanogan	Conconully Reservoir	13.0	13.0	13.0	11.6	7.7
Okanogan	Conconully Lake	10.5	10.4	10.4	10.2	8.0
Chelan	Lake Chelan	676.1	261.7	281.0	201.8	219.0
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	147.0	139.6	152.8	113.8
Kachess	Kachess Lake	239.0	230.0	227.1	221.2	194.2
Cle Elum	Lake Cle Elum	436.9	403.0	393.2	184.4	295.9
Bumping	Bumping Lake	33.7	21.2	8.8	7.5	11.6
Tieton	Rimrock Lake	198.0	184.8	148.3	178.0	136.6
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1404.1	801.1	656.8	632.1	711.5
Skagit	Diablo Reservoir	90.6	83.5	85.5	87.2	86.4
Skagit	Gorge Reservoir	9.8	8.2	8.4	8.0	8.1

1/ Based on Active Storage

2/ Banks Lake is being held down for construction at Dry Falls Dam.

\* 15-yr. Average 1963-1977

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	Fall		Winter		Spring	
	Sept-Oct Observed	1983 2/ Departure	Nov. 1983 - Mar. 1984 2/ Observed	1984 Departure	April 1984 Observed	Departure
Northeastern Wash	1.55	-1.55	11.78	+2.38	1.92	-0.66
Southeastern Wash	2.54	-0.06	12.22	+1.79	1.73	+0.2
East Slope Cascades	3.76	-0.99	28.14	+0.61	1.90	-0.29
North Central Wash	1.45	-0.14	7.42	+0.88	0.72	-0.13
Northwest Cascades	7.97	-5.24	57.50	+2.11	5.64	-1.00
Southwest Cascades	5.36	-3.32	40.99	-0.65	4.74	+0.12

Northeastern Washington - Lower Spokane, Colville, Sandpail, and Lower Kettle Drainages

Southeastern Washington - Touchet, Tucannon, and Palouse Drainages

East Slope Cascades - Yakima, Wenatchee, and Chelan Drainages

North Central Washington - Methow and Okanogan Drainages

Northwest Slope Cascades - Puget Sound Drainages

Southwest Slope Cascades - Lower Columbia Drainages

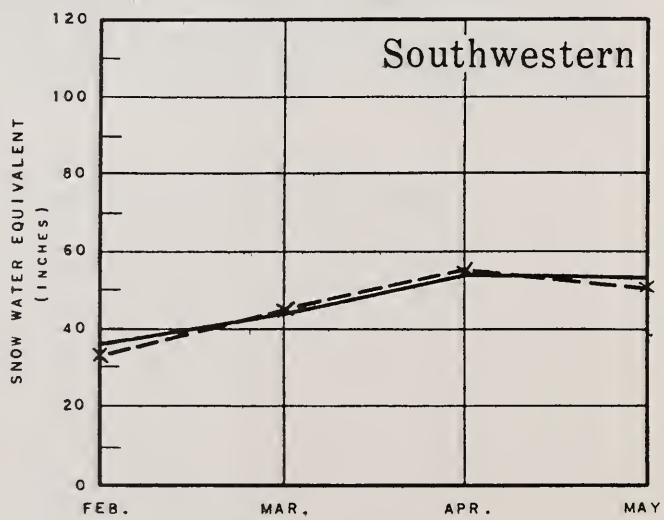
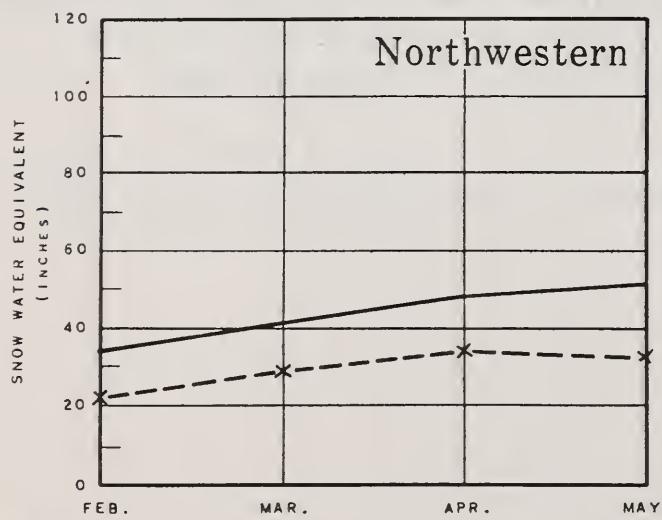
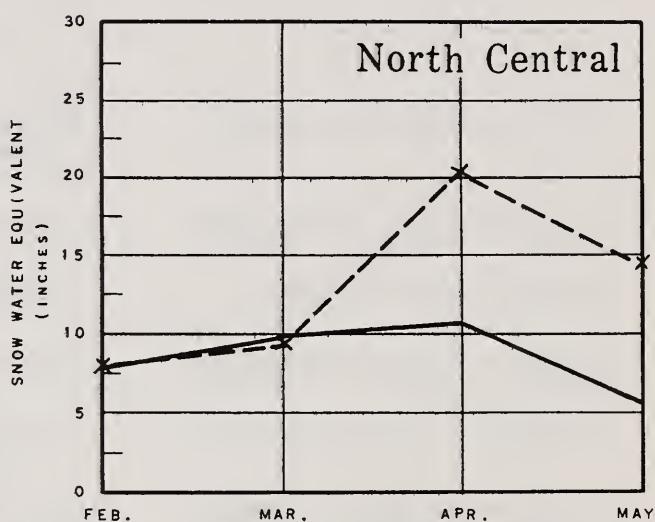
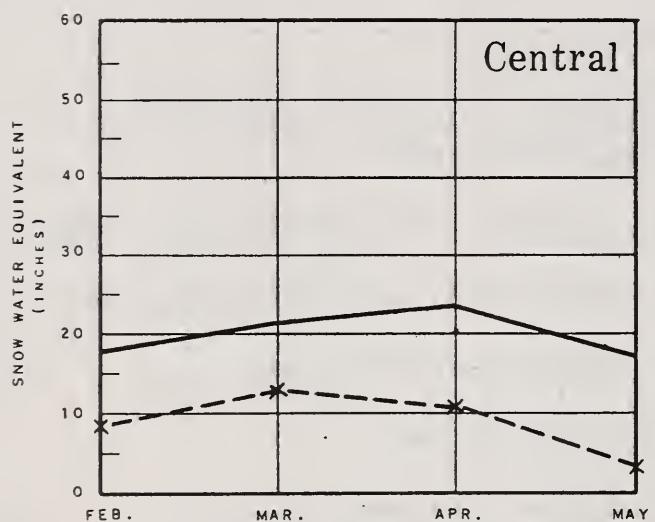
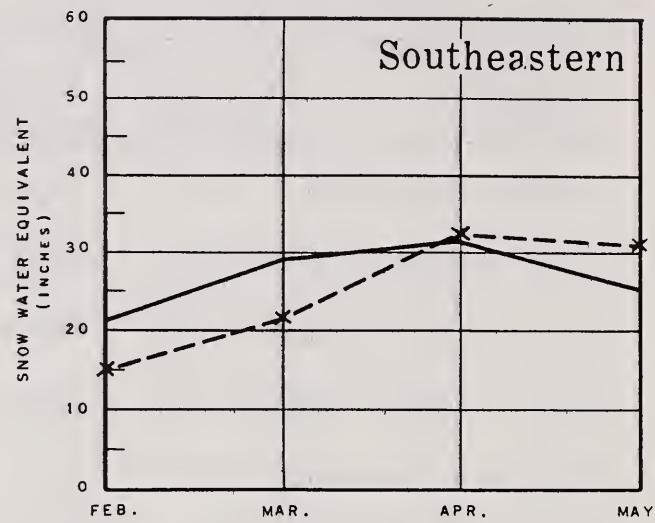
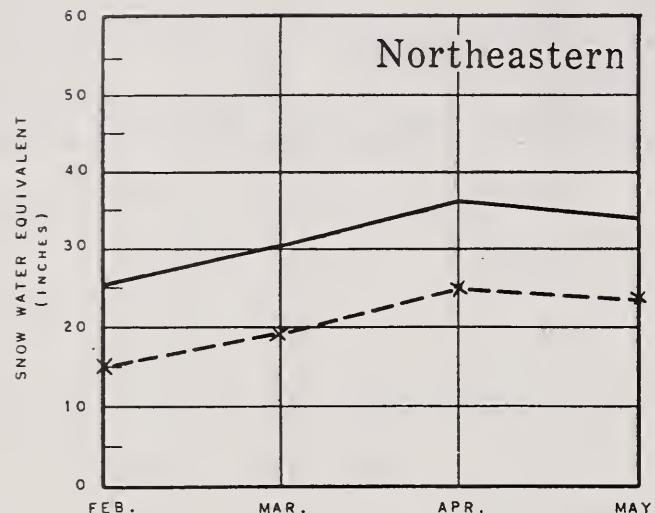
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

2/ - Departure from 15-year (1958-1972) drainage division average.

# WASHINGTON SNOW COVER

1984

## DRAINAGE AREAS



Average  
1984

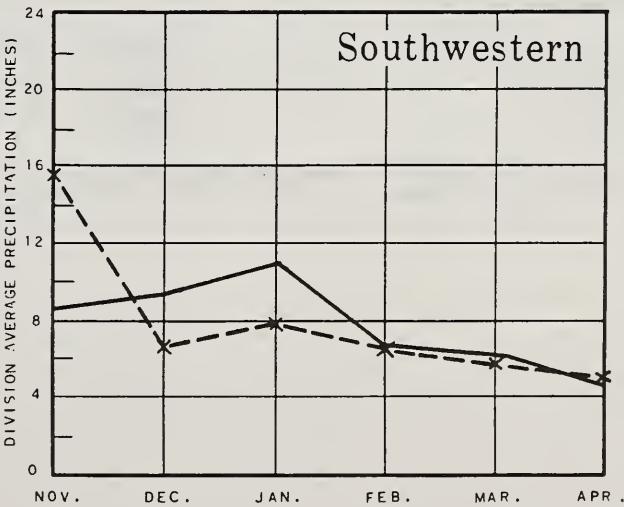
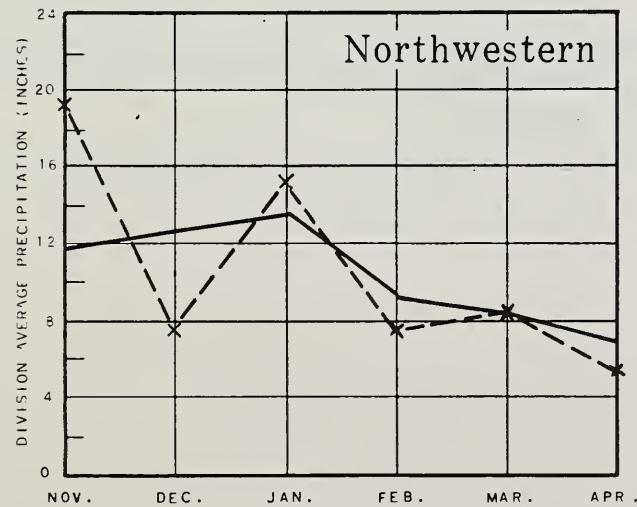
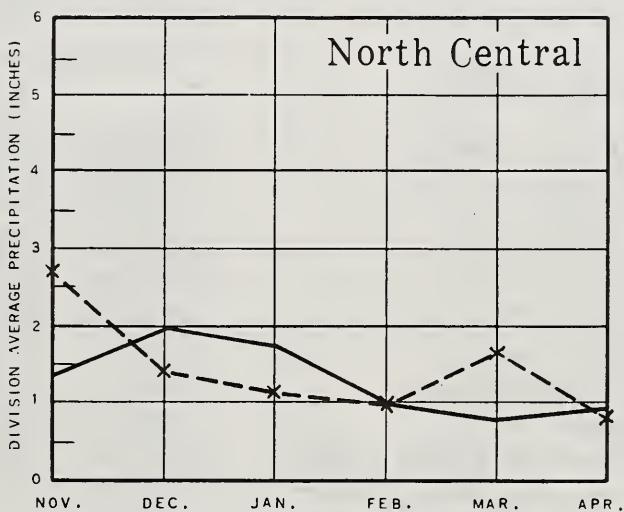
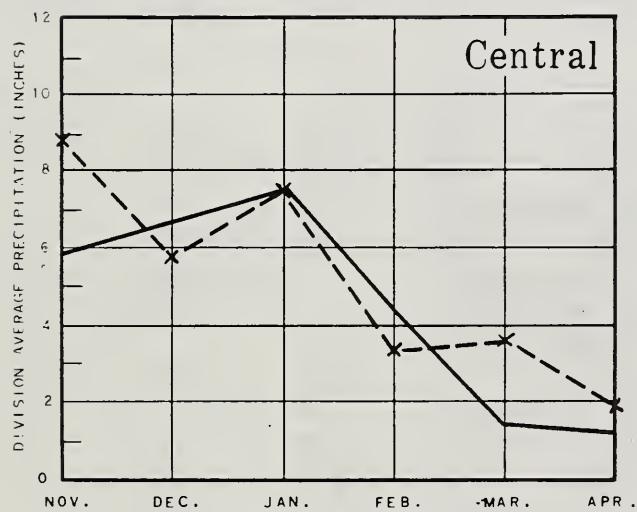
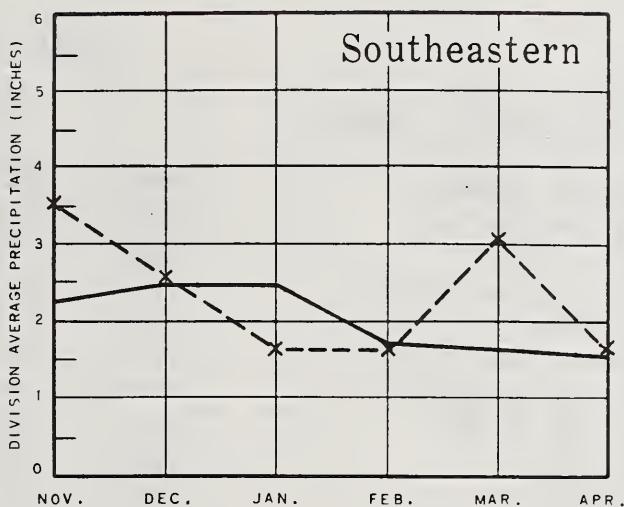
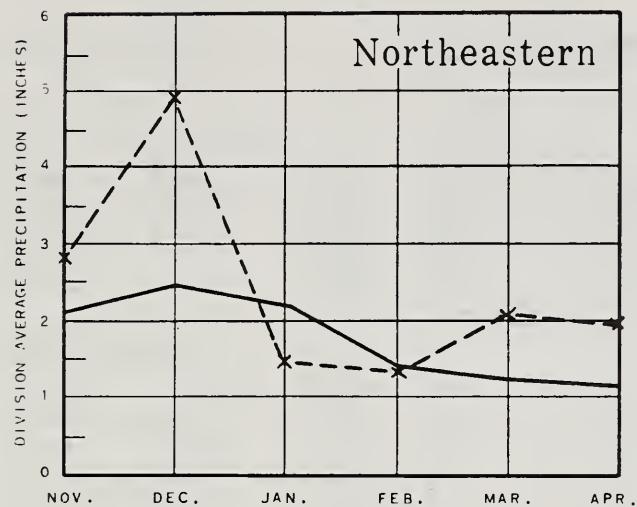
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Selected Snow Survey Courses by Soil Conservation Service

# WASHINGTON VALLEY PRECIPITATION

1984

## DRAINAGE AREAS



**Average** **1984**

Preliminary Analysis by National Weather Service

NOTE: Precipitation to end of month

## SNOW DATA TO MAY 1, 1984 - APPENDIX 1

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #

UPPER COLUMBIA DRAINAGEPEND OREILLE RIVER

Benton Meadow	16A02	2344	4/30	0	0.0	0.0	0.0
Benton Spring	16A03	4900	4/27	34	12.8	19.5	15.6
Boyer Mtn	17A02	5250	4/30	64	26.5	31.8	24.9
Bunchgrass Meadow	17A01	5000	5/02	68	28.2	40.9	29.0
Chewelah	17A04	4925	Not Measured				
Heart Lake Trail	14C10	4800	4/29	27	11.3	9.0	18.4
Hoodoo Basin	15C10	6000	4/29	98	42.8	45.7	54.5
Hoodoo Creek	15C01	5900	4/29	89	39.4	41.4	50.7
Lookout	15B02	5250	4/30	55	23.8	30.6	33.7
Nelson	2D04CA	3050	4/27	6	2.2	5.4	7.0
Schweitzer Bowl	16A06	4500	4/29	48	20.3	36.3	23.7
Schweitzer Ridge	16A05	6100	4/29	97	43.6	58.7	47.8

KETTLE RIVER

Barnes Creek	2B06CA	5300	4/27	54	20.9	19.2	20.7
Big White Mtn.	2E03CA	5500	4/28	57	21.8	25.7	21.1
Butte Creek	18A03	4070	Not Measured				
Carmi	2E02CA	4100	4/30	6	2.2	0.0	2.0
Farron #1	2B02CA	4000	Not Measured			13.6	9.4
Farron #2	2B02ACA	4000	Not Measured			14.2	9.2
Goat Creek	18A04	3595	Not Measured				0.0
Monashee Pass	2E01CA	4500	4/27	34	12.5	12.1	12.8
Summit G.S.	18A05	2150	Not Measured				5.8
Trapping Creek Lower	2E05CA	3050	4/29	0	0.0	0.0	0.0
Trapping Creek Upper	2E04CA	4450	4/29	11	4.3	4.7	6.0

COLVILLE RIVER

Baird	17A06	3215	Not Measured
Chewelah	17A04	4925	Not measured
Togo	18A10	3370	Not Measured

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# Average based on 1961-1980 averages

## SNOW DATA TO MAY 1, 1984 - APPENDIX 2

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

SPOKANE RIVER

Above Burke	15B08	4100	4/30	25	9.8	13.4	19.9
4th of July Summit	16B03	3100	4/30	0	0.0	0.0	0.0
Lookout	15B02	5250	4/30	55	23.8	30.6	33.7
Mosquito Ridge	16A04	5110	Not Measured				
Sherwin	16C01	3200	4/30	3	1.4	0.0	5.5
Sunset	15B09A	5600	Not Measured				

NEWMAN LAKE

Ragged Ridge	17B02	3333	5/01	0	0.0	0.0	New
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OKANOGAN RIVER

Aberdeen Lake	1F01CA	4300	4/30	1	0.3	2.7	1.7
Blackwall Peak	2G03CA	6250	4/27	65	25.0	31.5	37.8
Brenda Mine	2F18CA	4800	Not Measured			12.0	9.9
Brookmere	1C01CA	3200	4/30	0	0.0	2.7	5.6
Enderby	1F04CA	6250	4/26	109	45.7	50.4	42.3
Esperon Creek Lower	2F15CA	4400	Not Measured				9.3
Esperon Creek Middle	2F15CA	4700	" "				12.3
Esperon Creek Upper	2F13CA	5400	" "				18.1
Grayback Reservoir	2F08CA	5225	4/27	32	9.8	10.9	8.0
Hamilton Hill	2G06CA	4900	4/26	20	6.3	12.4	13.2
Harts Pass	20A05A	6500	4/26	95	37.0	44.2	48.9
Isintok Lake	2F11CA	6300	4/29	18	5.1	4.5	7.1
Lost Horse Mountain	2G04CA	7000	Not Measured			9.7	10.5
McCulloch	2F03CA	4200	4/30	2	0.4	0.6	2.7
Missezula Mtn.	2G05CA	5100	4/27	14	4.3	8.6	6.0
Mission Creek	2F05CA	6000	Not Measured			24.3	21.7
Monashee Pass	2E01CA	4500	4/27	34	12.5	12.1	12.8
Mount Kobau	2F12CA	5960	4/29	55	16.9	20.1	12.8

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# Average based on 1961-1980 averages

## SNOW DATA TO MAY 1, 1984 - APPENDIX 3

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

OKANOGAN RIVER (CONT.)

Mutton Creek No. 1	19A01	5700	Not Measured				11.8	
Mutton Creek No. 2 SP	19A11	6000	Not Measured				New	
Nickel Plate	2G02CAN	6200	4/29	28	8.0	8.3	8.1	
Oyama Lake	2F19CAN	4400	4/26	11	3.1	3.9	3.1	
Postill Lake	2F07CAN	4500	4/30	20	6.8	7.0	6.6	
Rusty Creek	19A03	4000	4/26	0	0.0	2.5	0.7	
Salmon Meadows	19A02	4500	Not Measured				5.0	
Silver Star Mountain	2F10CAN	6050	4/29	74	30.7	36.8	28.3	
Summerland Reservoir	2F02CAN	4200	4/29	16	5.9	6.4	5.8	
Sunday Summit	2G01CAN	4300	4/26	0	0.0	0.0	1.1	
Trout Creek	2F01CAN	4700	4/29	6	1.6	2.7	5.2	
Vaseux Creek	2F20CAN	4600	4/30	20	6.4	7.6	2.5	
White Rocks Mountain	2F09CAN	6000	4/30	59	23.4	29.0	24.8	

METHOW RIVER

Harts pass	20A05A	6500	4/26	95	37.0	44.2	48.9	
Mutton Creek NO. 1	19A01	5700	Not Measured			16.1	11.8	
Mutton Creek No. 2 SP	19A11	6000	Not Measured				New	
Rusty Creek	19A03	4000	4/26	0	0.0	2.5	0.7	
Salmon Meadows	19A02	4500	Not Measured			13.2	9.3	

CHELAN LAKE BASIN

Cloudy Pass +	20A22	6500	Not Measured				35.2	
Lyman Lake	20A23	5900	5/01		68.8sp	62.0	82.0	
Little Meadows +	20A24a	5275	Not Measured			37.6	37.6	
Mirror Lake	30A39	5600	5/01		32.2sp		New	
Park Creek Ridge	20A12	4600	5/01		34.7sp	36.0	31.7	
Rainy Pass	20A09	4780	4/26	79	33.0	39.0	43.1	

# Average based on 1961-1980 averages

+ Aerial stadia observation

## SNOW DATA TO MAY 1, 1984 - APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
NAME	Number	Elevation					Average #

ENTIAT RIVER

Brief	20B19	1600	4/30	0	0.0	0.0	3.8
Entiat Meadows +	20A33	4540	5/03	66	27.1	46.9	35.7
Entiat River Trail +	20A34	3325	5/03	12	5.0	0.0	9.1
Fox Camp +	20A36	6510	5/03	138	60.7	72.7	62.9
Pope Ridge	20B20	3450	Not Measured			10.3	9.4
Pugh Ridge +	20A32	6725	5/03	81	30.8	47.8	37.9
Shady Pass	20A37	6200	4/30	69	25.6	33.8	30.3
Snow Brushy +	20A35	3910	5/03	66	27.7	32.4	28.0
Tommy Creek +	20B21	4900	5/03	33	14.5	17.0	20.2

WENATCHEE RIVER

Berne Mill Creek	21B23	3170	4/30	19	7.0	16.5	21.8
Berne Mill Creek SP	21B41	3240	4/30	19	7.0	9.1	17.7
Blewett Pass No. 2	20B02	4270	4/30	15	6.3	12.5	9.6
Chiwaukum G. S.	20B16	1810	4/30	0	0.0		1.5
Lake Wenatchee	20B05	1970	Watershed Logged Discontinued				
Lyman Lake	20A23	5900	5/01		68.8sp	62.0	82.0
Merritt	20B18	2140	4/30	0	0.0	.	5.5
Stevens Pass	21B01	4070	4/30	93	41.5	40.5	54.3
Stevens Pass Sand Shed	21B45	3700	4/30	56	22.7	22.0	34.5

COLOCKUM CREEK

Trough #2(SP)	20B25	5310	4/30	7	2.3	18.9	6.9
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+ Aerial stadia observation

# Average based on 1961-1980 averages

## SNOW DATA TO MAY 1, 1984 - APPENDIX 5

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

SQUILCHUCK CREEK

Beehive Springs	20B03	4400	4/30	0	0.0	9.9	1.8
Scout-a-Vista	20B04	3400	Not Measured			0.0	0.3

STEMILT CREEK

Stimelt Slide	20B06	5000	4/30	8	2.7	6.8	
Upper Wheeler(SP)	20B07	4400	4/30	24	8.4	13.6	1.0

YAKIMA RIVER

Ahtanum R.S.	21C11	3100	5/01	0	0.0	0.0	0.0
Big Boulder Creek	21B09	3200	4/30	20	8.5	11.3	9.1
Blewet Pass No. 2	20B02	4270	4/30	15	6.3	12.5	9.6
Bumping Lake Old	21C08	3450	4/13	32	10.8	8.1	9.0
			4/27	8	3.2	8.1	9.0
Bumping Lake New	21C36	3400	4/13	36	13.1	13.9	13.6
			4/27	20	8.4	13.9	13.6
Cayuse Pass	21C06	5300	4/27	184	83.0		90.6
Colockum Pass	20B09	5370	Not Measured				
Corral Pass	21B13	6000	5/01		8.1sp	19.2	37.7
Fish Lake	21B04	3371	4/30	47	19.8	29.6	26.4
Green Lake	21C10	6000	5/01		20.9sp	34.8	
Grouse Camp	20B11	5385	Not Measured			29.8	17.1
Lake Cle Elum	21B14	2200	5/01	0	0.0	0.0	5.5
Morse Lake	21C17	5400	5/01		65.2sp	80.5	60.9
Olallie Meadows	21B02	3625	4/28	63	30.2	12.8	50.1
Stampede Pass	21B10	3860	5/01	93	48.0	28.6	41.2
Tunnel Avenue	21B08	2450	4/11	34	12.2		15.4
			5/01	9	3.7		15.4
White Pass E. Side	21C28	4500	4/13	74	21.8	20.7	26.1
			4/26	59	23.4	20.7	26.1

# Average based on 1961-1980 averages

sp Snow Pillow Reading

## SNOW DATA TO MAY 1, 1984 - APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	THIS YEAR		PAST RECORD	
NAME	Number	Elevation		Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year

AHTANUM CREEK

Ahtanum R. S.	21C11	3100	5/01	0	0.0	0.0	0.0
Green Lake	21C10	6000	Not Measured		20.9sp	34.8	

LOWER COLUMBIA DRAINAGEMILL CREEK

High Ridge SP	18D19	4890	4/30 GT	75	34.1	24.0	27.0
Touchet # 2 SP	17C55	5530	5/01		30.1sp	31.9	

COWLITZ RIVER

Cayuse Pass	21C06	5300	4/27	184	83.0		90.6
White Pass E. Side	21C28	4500	4/13	74	21.8	20.7	26.1
			4/26	59	23.4	20.7	26.1

PUGET SOUND DRAINAGEWHITE RIVER

Cayuse Pass	21C06	5300	4/27	184	83.0		90.6
Corral Pass	21B13	6000	5/01		28.4sp	19.2	37.7
Morse Lake	21C17	5400	5/01		65.2sp	80.5	60.9

GREEN RIVER

Airstrip	21B24	1800	4/29	0	0.0		
Charley Creek	21B25	1200	4/29	0	0.0	0.0	
Cougar Mountain	21B42	3200	5/01		15.8sp	0.0	16.4
Grass Mtn. No. 2	21B27	2900	4/29	3	1.1	0.0	2.1
Grass Mtn. No. 3	21B28	2100	4/29	0	0.0		
Lester Creek	21B29	3100	4/29	25	14.0	5.0	14.5
Lynn Lake	21B50	4000	Not Measured			0.0	3.2
Sawmill Ridge	21B31	4700	4/29	73	29.2	22.0	
Stampede Pass	21B10	3860	5/01	93	48.0	28.6	41.2
Twin Camp	21C30	4100	4/29	43	17.8	10.8	13.5

# Average based on 1961-1980 averages

sp Snow Pillow Reading

## SNOW DATA TO MAY 1, 1984 - APPENDIX 7

SNOW	DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
				Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
	NAME	Number	Elevation					Average <sup>#</sup>

SNOQUALMIE RIVER

Olallie Meadows	21B02	3625	4/28	63	30.2	12.8	50.1
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SKYKOMISH RIVER

Stevens Pass	21B01	4070	4/30	93	41.5	40.5	54.3
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Stevens Pass Sand Shed	21B45	3700	4/30	56	22.7	22.0	34.5
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SKAGIT RIVER

Beaver Creek Trail	21A04	2200	4/26	0	0.0	0.0	5.5
Beaver Pass	21A01	3680	4/26	44	13.0	28.3	31.3
Brown Top Ridge	21A28	6000	4/26	131	53.2	50.4	67.5
Devils Park	20A04	5900	4/25	82	29.6	40.4	48.2
Freezeout Creek Trail	20A01	3500	4/26	4	1.1	4.9	8.4
Freezeout Meadows New	20A38	5000	4/26	51	19.4	37.1	35.8
Granite Creek	21A29	3500	4/26	16	5.4	7.3	18.2
Harts Pass	20A05A	6500	4/26	95	37.0	44.2	48.9
Klesilkwa	3D03ACA	3700	4/25	0	0.0	0.0	7.2
Lightning Lake	3D02CAN	4000	4/25	18	5.9	9.8	11.5
Lyman Lake	20A23	5900	5/01		68.8sp	62.0	82.0
Meadow Cabins	20A08	1900	4/25	0	0.0	0.0	5.8
New Hozomeen Lake	21A30	2800	4/26	0	0.0	0.0	7.8
Rainy Pass	20A09	4780	4/26	79	33.0	39.0	43.1
Thunder Basin	20A07	4200	4/25	32	10.2	19.6	24.3

# Average based on 1961-1980 averages

sp Snow Pillow Reading

## SNOW DATA TO MAY 1, 1984 - APPENDIX 8

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

BAKER RIVER

Dock Butte +	20A11A	3800	4/30	136	58.0	48.0	74.1
Easy Pass +	21A07A	5200	4/30	169	74.0	73.0	91.2
Jasper Pass +	21A06A	5400	4/30	182	76.0	85.	95.3
Martin Lake	21A09A	3600	4/30	158	68.0	68.0	81.0
Mt. Blum +	21A18A	5800	4/30	156	69.0	69.0	70.9
Rocky Creek	21A12A	2100	4/30	12	5.0	0.0	22.3
Schreibers Meadow	21A10A	3400	4/30	90	40.0	34.0	63.9
S.F. Thunder Creek +	21A14A	2200	4/30	0	0.0	0.0	1.5
Watson Lake	21A08A	4500	4/30	132	55.0	57.0	73.2

OLYMPIC PENINSULA DRAINAGEDUNGENESS RIVER

Deer Park	23B04	5200	4/30	28	12.0	25.4	22.5
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MORSE CREEK

Cox Valley	23B14	4500	4/29	77	34.4	45.8	42.0
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ELWHA RIVER

Hurricane	23B03	4500	4/27	43	16.5	22.2	25.6
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+ Aerial stadia observation

# Average based on 1961-1980 average

## SNOWMELT READINGS, MAY 1, 1984 - APPENDIX 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

PEND OREILLE RIVER

Bunchgrass Meadow	17A01	5000	4/15		30.7	39.5
	GT		5/02	83	29.2	27.12
			5/01		28.4	40.9

OKANOGAN & METHOW RIVERS

Harts Pass	20A05	6500	4/16		38.2	51.1
	GT		4/26	95	37.0	44.2
			5/01		39.9	50.5
Salmon Meadow	19A02	4500	4/16		19.9	33.3
			5/01		14.6	17.1

CHELAN LAKE BASIN

Lyman Lake	20A23	5900	4/15		68.9	68.7
	GT		5/01		68.8	64.0
Mirror Lake	20A39	5600	4/15		30.2	
	GT		5/01		32.2	
Park Creek Ridge	20A12	4600	4/18		35.6	49.5
			5/01		34.7	41.5
Rainy Pass	20A09	4780	4/15		34.4	47.0
	GT		4/26	79	33.0	39.0
			4/30		34.3	42.6

ENTIAT RIVER

Pope Ridge	20B20	3450	4/15		13.0	14.5
	GT		5/01		6.9	1.9

WENATCHEE RIVER

Blewett Pass	20B02	4270	4/15		18.8	21.0
	GT		4/26	25	9.4	12.5
			5/01		12.8	11.9
Lyman Lake	20A23	5900	4/15		68.9	68.7
	GT		5/01		68.8	64.0
Stevens Pass	21B01	4070	4/15		39.7	24.5
	GT		5/01		37.1	16.1
Trough # 2	20B25	5300	4/15		2.7	24.9
	GT		4/30		(2.5)	25.3
			5/01		0.4	18.9

GT = Ground Truth measurement at SNOTEL site

## SNOW READINGS, MAY 1, 1984 - APPENDIX 2

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	THIS YEAR		PAST RECORD	
NAME	Number	Elevation		Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year

COLOCKUM CREEK

Trough # 2	20B25	5300	4/15		2.7	24.9
	GT		4/30	6	(2.5)	25.3
			5/01		0.4	18.9

STEMILT CREEK

Upper Wheeler	20B07	4400	4/15		14.6	19.6
	GT		4/30	38	(11.3)	16.8
			5/01		9.3	13.6

YAKIMA RIVER

Big Boulder Creek	21B09	3200	4/15		14.3	15.6
	GT		5/01		17.6	4.8
Bumping Ridge	21C38	4600	4/15		31.2	
	GT		5/01		30.6	
Corral Pass	21B13	6000	4/15		10.5	24.4
			5/01		9.1	19.2
Fish Lake	21B04	3371	4/15		32.2	
	GT		5/01		29.2	
Green Lake	21C10	6000	4/15		14.7	35.2
	GT		5/01		20.8	34.8
Grouse Camp	20B11	5385	4/15		19.8.	29.4
	GT		4/30		16.2	30.9
Morse Lake	21C17	5400	4/15		61.8	81.7
			5/01		65.2	80.5
White Pass E. Side	21C28	4500	4/15		26.6	23.9
	GT		5/01		26.8	20.7

GT = Ground Truth measurement at SNOTEL site

## SNOW READINGS, MAY 1, 1984 - APPENDIX 3

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

AHTANUM CREEK

Green Lake	21C10	6000	4/15		19.7	35.2
	GT			5/01	20.9	34.8

TOUCHET RIVER

Touchet # 2	17C5	5530	4/16		31.7	39.2
	GT			5/01	30.1	31.9

LEWIS RIVER

June Lake	22C09	3200	4/15		25.5	
	GT			5/01		
Lone Pine Shelter	21C26	3800	4/15		40.0	46.8
	GT			5/01	39.8	42.5
Plains of Abraham	22C01	4400	4/15		94.7	
			5/01		99.6	
Sheep Canyon	22C10	4050	4/15		49.8	
			4/29		42.4	
Spencer Meadow	21C20	3400	4/15		25.1	32.0
			5/01			22.6
Surprise Lake	21C13	4250	4/16		59.6	58.7
	GT			5/01	58.0	51.8

COWLITZ RIVER

Pigtail Peak	21C33	5900	4/15		49.7	48.0
	GT			5/01	51.0	46.1
Potato Hill	21C14	4500	4/15		22.4	
	GT			4/30	20.5	
Sheep Canyon	22C10	4050	4/15		49.8	
			4/29		42.4	
Strawberry Landing	22C08	3280	4/15			40.2
	GT			5/01		37.9
Steppes PC	22C11		4/15		69.7	
			4/30			
Spirit PC	22C12		4/15		.6	
			4/30			

GT = Ground Truth measurement at SNOTEL sites

## SNOW READINGS, MAY 1, 1984 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #

NISQUALLY RIVER

Paradise Park	21C35	5500	4/20	18.0
			5/01	16.6

WHITE RIVER

Corral Pass	21B13	6000	4/15	10.5	24.4
	GT		5/01	8.1	19.2
Morse Lake	21C17	5400	4/15	61.8	81.7
	GT		5/01	63.2	80.5

GREEN RIVER

Cougar Mountain	21B42	3200	4/15	19.1	0.2
	GT		4/30	16.1	0.0
Stampede Pass	21B10	3960	4/15	48.0	39.4
	GT		5/01	48.0	35.0
			5/01	46.8	33.5

SNOQUALMIE RIVER

Olallie Meadows East	21B55	3960	4/14	57.4	51.6
			5/01	56.3	46.2

GT = Ground Truth measurements at SNOTEL sites

